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Art Unit 3693;
Examiner James A Vezeris:

Claims
Office Action Dated: 5/6/2008
Notice of Non-Compliance dated: 08/18/2010

Please note that the current and updated claims will replace all other pending claims.

PART A: Amendments filed 6/1/2010 including Figure descriptions and the CIP references
PART B: Clean sheet of amended claims
PART C: Response to prior-art challenges
PART D- Edited last amended claims

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PART A: Amendments filed 6/1/2010 including Figure descriptions and the CIP references

Response to Specification Objection #2

Cross reference to related application:

This application is continuation in part (CIP) to previous application: Risk Management for Manufacturing

09/640,272 dated 8/17/2000 Risk Management for Manufacturing

Response to Drawing Objection # 3

The following addendum is inserted in page 8 of specification, providing a short explanation for each drawing.

Addendum to page 8 of specification: Short explanation of drawings

Fig. 100

Fiduciary Account (101) refers to permanent user account residing in the partner, bank.

Escrow account (102) is an electronic virtual holding account that serves as a book-keeping account for computer generated transactions.

Fig 200

Partner bank (205) is an independent financial institution linked to worldwide banking system.

System (204) refers to a Node of operation in a given location.

Node is a computerized trading facility located in a country where it is licensed to trade physical goods.

Interface is a computer program that provides communication protocol between two party's computers.

User interface (202) is simply the worldwide web browser. Banks interface require additional layer(s) of communication such as Automatic Clearing House (ACH).

Fig 300
Order (304) is a generated purchase or sale instruction based selected from menu on computer screen.

Order match clearing (305) refers to identical buy and sell created by two different users.

Performance bond (307) is an insurance or guarantee instrument for honoring an order if it is matched or filled.

Clearing refers to book keeping transaction that ensures buyer and seller both has deposited the exact value of contract. In case of spot trade the warehouse receipt replaces Cash.

Fig 350
Warehouse refers to a physical warehouse which is bonded (352), that is, guaranteeing the goods availability at all times based on the bill of lading provided to buyer.

Physical delivery means electronic warehouse receipt as bill of lading.

Fig 400
Cash settlement refers to transaction settlement where no physical delivery is made yet, that is, the contract is not closed or completed, known as open contract.

Fig 450
The clearing process between two users (451 and 451') from any two nodes whose transaction is financially cleared (457) through their respective local banks (452 and 452') facilitated (455) by an independent financial institution, who in turn is linked to worldwide financial system.

Fig 500
Inter-networking refers to a secured network that is created by a unified interface among members of a group.

Fig 700
Open clearing allows the Partner banks (707's) of all Nodes employ a common cash management as electronic fund transfer (EFT).

Payment, as a subsystem of cash management, for example ACH –available in select part of world- or Society of Worldwide Interbank Financial Transaction (SWIFT) format MT103.

Fig. 800
Fiduciary account explained in Fig. 100 assumes that all financial transactions are performed in local currency. Fund maintenance refers to the case where some

transactions may require foreign currency translation; if so the Fiduciary account (802) will consist of two sub accounts, one in local currency (804) another in US Dollar.

Fig 900
Inter nodal payment addresses foreign payments that may involve fixed (F) rate currencies, including dollar pegged, for example Chinese Yuan, or variable(V) rate currencies, for example euro. Fig 900 depicts the process flow, between two Nodes, for each of the scenarios under any system of payments. For fixed currency, the process flow applies Federal Reserve ACH system (906) at fixed rate conversion (907); whereas for, say, euro the process flow employs universal EFT (905) after converting (907) at offered rate at the time of clearing.

Fig. 1100
All Nodes operate during normal daytime hours at local time based on US Easter Standard Time(EST)

Fig. 1200
Time lapsed between clearing and daily settlement is shown to be not more than 2-days which includes international time zone (Pacific midpoint)

Fig. 1300
SWIFT protocols specify various codes for monetary transaction such as fund transfer

Fig. 1400
SWIFT protocols specify various codes for messaging such as statement of account

Response to Claim Objection #4

Last amended claims submitted September 3, 2009 in response to *Notice of Non-Compliant* dated September 1, 2009.

Claims 1-18 have been appropriately re-labeled: attached new amendment)

Claim 17 has been amended to address the objection

The newly amended claim is attached.

Response to Claim Rejection # 5

Claim 18 amended to comply with 35 U.S.C. 101

The attached amended claim addresses claim rejection #5

Response to claim Rejection # 6

Claim 1, steps g and h amended to comply with U.S.C. 112, 2nd paragraph

The amended claim addresses claim rejection #6

Response to claim Rejection # 7

Claims 1-9, 11-13 and 15-18 have been amended to comply with U.S.C. 112

The amended claim addresses *claim rejections* #7.

PART B: Clean sheet of amended claims

Amended claims were submitted September 3, 2009 in response to Notice of Non-Compliant dated September 1, 2009

Response to Objection #4

The claims 1-18 have been appropriately re-labeled

Further, claim 17 has been corrected to provide adequate explanation; amended claim 17

Claim Rejection # 5

Claim 18 has been appropriately corrected; as amended claim 18

Claim Rejection # 6

Claim 1, steps g and h have been appropriately amended.

Claim Rejection # 7

Claims 1-9, 11-13 and 15-18 have been amended to point out the specific claims applicant considers as the invention; claim 1-9, 11-13 and 15-18 amended.

Amended claim:

1. (Amended) A cash management data processing system for multi-location standardized trading Nodes, allowing financial clearing within each Node, and between any two Nodes, linked to banking payment systems, comprising:

a) Fiduciary and electronic Escrow accounts at each Node;

b) an electronic processor for fund movement between Fiduciary and Escrow accounts bi-directionally at each Node;
c) an electronic intelligent hub for matching orders among different Nodes
d) an electronic processor for fund movement from Fiduciary account of one Node to another for financial clearing;
e) a price matching engine in selected base currency;
f) a system providing daily cash settlement reporting;
g) an electronic processor for reporting daily account statement marked-to-market;
h) an electronic processor for generating physical delivery receipt against cash settlement.

2. (amended) System of claim 1, wherein the required funds for customer's pending match will be blocked from said Fiduciary account by creating a fiduciary and a virtual accounts as a component of financial transaction until a match is made or the order is canceled.

3. (amended) System of claim 1 wherein said Fiduciary account holds local currency and at least one foreign currency as base currency in a given Node, for purpose of Node-to-Node financial transaction.

4. (amended) System of. claim 2, wherein said blocked funds from Fiduciary account are moved to Escrow account in base currency after a match is made, clearing the financial transaction.

5. (amended) System of claim 4, wherein a daily price adjustment to the blocked funds in said Escrow account is made reflecting marked-to-market cash value of transaction for settlement purpose of open orders, not yet fulfilled.

6. (amended) System of claim 5, wherein said marked-to-market pricing triggers movement of funds between Fiduciary and Escrow account to make the necessary adjustment by adding funds or withdrawal of excess funds.

7. (amended) System of claim 6, wherein the net amount retained in Escrow account resulting from said movement of funds between Fiduciary and Escrow account constitute daily cash settlement required for avoiding liquidation of order.

8. (amended) System of claim 1 wherein, designated bonded warehouses are utilized for said physical delivery settlement to guarantee availability of goods..

9. (amended) System of claim 8, wherein, physical delivery settlement is made by, exchanging said bonded warehouse digital receipt of goods with electronic ~~cash~~ fund transfer from Fiduciary account, constituting electronic cash on delivery, COD

10. (Canceled)

11. (amended)) System of claim1, wherein said -financial clearing between two Nodes is accomplished by transferring fund from Fiduciary account of one Node to Fiduciary account of another Node in base currency, constituting Node-to-Node matching guaranteed transaction.

12. (amended) System of claim 11, wherein said ~~electronically~~ transferred fund is moved to Escrow account of the Node that the match is made, constituting Node-to-Node financial clearing.

13. (amended) System of claim 12, wherein said transferred fund to Escrow account constitutes the additional fund required to complete settlement process in the Node that match was made, guaranteeing last transaction.

14. (Canceled).

15.(amended)System of, claim 1 wherein the time period for daily settlement reflects the time T representing ~~day 1~~ execution of the trade to T+1 representing settlement date plus time zone difference which includes International Date Line. Constituting a Node-to-Node clearing cycle..

16. (amended) System of claim 1 wherein said banking payment system includes the Automatic Clearing House(ACH) format and Rules utilization whenever Fiduciary account in a Node communicates with Federal Reserve Automatic Clearing House directly, or via the National Clearinghouses in North America.

17. (amended) System of claim 1 wherein Society of Worldwide Interbank Financial Transaction (SWIFT) protocols MT 103 format for payments system and MT 940 format for messaging, that is, daily account statement outside North America to communicate with Fiduciary accounts of Nodes executing electronic fund transfer between any two Nodes in different locations for financial clearing and settlement.

18. (amended) System of claim 17 wherein the payments in foreign currency are interbank currency exchange rates at noon time, Eastern Standard Time, captured for

daily currency translation of for the purpose of moving funds between Fiduciary account and Escrow account at the end of each trading day for settlement purposes.

PART C: Response to prior-art challenges

Preamble- The main components of invention are extracted from specification for purpose of discussion.

A) The local Node operation

- Clearing the assumption of obligations as a (central) counter party between buyer and seller of securities resulting in taking a position as counterparty by the clearing organization.
- For a trading house (Node[1]) to take position, active participation of market makers as counterparty is essential in order to provide liquidity. This is necessary to significantly reduce the risk of bilateral default. The Node's trading platform handles standard as well as semi-standard products ranging from forwards (swaps), to futures and options
- The heart of financial clearing and subsequent settlement is *payment*, the mechanism of which is part of banking function and would heavily rely on credit. The implementation of common cash management platform using ACH as its basic payment system facilitates the exchange of data among these Nodes such as customer's account balance and fund transferred
- The issue of the time elapsed between the clearing and settlement is central to the extent that minimizing the risk requires a real time or near real time (same day) clearing and settlement.

B) Inter-nodal

The Nodes representing local market, will routinely match and execute trade in *local currencies*, clear the match and settle *through their local banks* In order for participants to extend their trading beyond the local market all intra-Nodes will be able to match, execute and clear in a fixed currency. Each Node will maintain a fiduciary account in the local currency for all participants. For the purpose of inter-Nodal trade a limited amount of Fixed Currency (FC) reserve is maintained at each node (where local currency is different) to cover short term fluctuation of currency conversion

Open Clearing System for business to-business, envisages a direct clearing between any two trading houses among any number of Nodes at specific market locations[2]. All Nodes are connected to a common "pipeline", at all times.

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1 The Node is a local trading facility consisting of a trading platform, a core support team that manages day to day operation and on line connectivity with Partner bank and designated bonded warehouse. The operation may include product marketing, customer relation, logistical support and back office

2.Such markets may be identified on basis of concentration of producers and or consumers

A settlement between the parties in two different Nodes, within NAFTA or EU region will then be calculated at "T" plus the time zone difference between the two Nodes participants. The concept of routing the payment instruction through all Nodes network for execution at appropriate Node is the essential element of standardizing payment (for clearing) method. Movements on the accounts are then reported, in real time, daily and during day using interim message.

Claim 1a

DAVID et al; US 6,493683 B1

Column2-3, lines 64-10

"The customer places an order to the server OCES alerts custodian to securitize the order as to whether customer has the "proper commodities, assets or funds" and "separates the same to an escrow account". There are several points differentiating the invention from this model as specified.

i) OCES and custodian are two apparent entities, one a computer server and another legal entity who operates a business. The invention has no such distinction which plainly states the nature of Fiduciary account as a bank account residing with its bank partner..

ii) There is no actual mention of Fiduciary account in this specification and as a result the suggested Escrow account has no bearing with electronic escrow account stated in claim 1a.

iii) The custodian may or may not be able to "securitize" a given order. This means that David system is not a dedicated server for products that are already securitized and as such the orders are random much the same as E-Bay model. Present application incorporates a listed set of products complete with specification and last price at which the product was traded. Such a built-in securitization is dynamically adjusted and it is interactive

Invention: Fiduciary account is individually segregated fiduciary account acting as a common fund for settlement purpose a bank account, opened at a local bank selected as a *partner* for purpose of payment. It is the Node's link to banking system. Electronic escrow account is a book-keeping account for the Node's back-office operation and is not subjected to bank's reporting

Claim 1b.: Columns5-6, Lines 60-5.

"...if the customer is interested only in buying then registration consists of depositing assets (including funds). Assets are transferred into depository while the funds are credited to his account..."

i) The Applicant's invention allows customer to do his own fund movement by instructing movement of funds from Fiduciary to Escrow account to enable him to place order. This is because customer funds his account irrespective of being a buyer or seller

ii) David et al. system assumes the custodian does credit checking that may or may not limited o funds and off line and hence outside of the system. Thee Applicant's invention deals with all-inclusive Node that deals with cash management for both parties in equal amount.

Claim 1c: Columns 7-8 Lines 66-5

"Optionally a matching component ... uses a predetermined algorithm to compare the *sell* orders, and if no match is found negotiates a match..."

i) The Applicant's invention intelligent hub is a continuous matching within the number of Nodes that are located worldwide

ii) The OCES server has limitation imposed on itself with respect to requiring custodians and lack of liquidity due to absence of intermediary as players.

iii) Further more, OCES has no capability of matching buy order.

iv) Also, OCES introduces no mechanism for global; matching for hub to direct

Claim 1d: Columns5-6, Lines 60-5.

i) The Applicant's invention concept of communication between two Nodes requires cloning of Nodes, each having the same properties at different locations worldwide. David et al fails to specify the matching of orders generated outside its server and corresponding, but separate custodian may be located.

Shepherd US 6912,510 B1

Claim 1e: Column 26-27 Lines64-11)

"... to receive its *desired* $US currency amount as soon as possible after the ordering party specifies it is prepared immediately pay..."
Applicant's invention provides matching that would include countries that deal with local currencies other than US dollar. The complexity of currency conversion will make matching impossible and hence a base currency is adopted that may be any major currency such as Euro, Dollar or Swiss Franc, etc. For settlement, however, currencies are converted to one foreign currency based on the region, for example Japanese Yen in Singapore, or Euro.

Claim 1f: Column 29 Lines40-56
"... each CE transfer entity electronically *notifies* the applicable CONTRACT APP of the opening balances of all the debit credit INVNTCO accounts..... credit account balance should be greater than or equal to zero..."

Applicant's invention settlement process is cash offset for unexpired contract and it is on-line generated process without any intermediary action.

Claim 1g: Column 29 Lines 40-56
"Upon *receipt of notifications* the applicable CONTRACT APP updates/confirms.. shadow balances".

Applicant's invention generates account statement as generated and compiled within the Node. The information is available on customer's screen without a need for intermediary "shadowing" third party. Customer's account is routinely updated which includes marked-to-market position.

Claim 1h: Column 34 Lines65-67
"An indicator that individual end-of-day gross payments/receipts to/from all participating stakeholders from/to specified 3rd party trustee/clearing entity are to be netted"
Applicant's invention settlement process for expired contract with delivery pending is cash release on behalf of buyer to the seller against receipt of bill of lading that is posted

by the warehouse on behalf of the seller. All processes are on-line generated without any intermediary action

Claim 2.

David: Column 7 Lines 30-35

"The *custodian* ... places a block or segregates the shares .. in the account of customer or alternatively transfers shares to escrow account.."

Applicant's invention allows the customer to instruct the system to allocate the required funds for his pending match by blocking the exact amount from his Fiduciary account. If the match is successful the system virtually allocates the blocked fund to an Escrow account managed by the system. Here the custodian is incorporated into the system and the customer navigates his order routing and execution without further ado.

Claim 3

Shepherd: Column 40 Line 26-54

" ...Base... currency and national currency exchange rate is used where applicable to convert an ordering party's contract requirement into base... currency and national currency of the product so enabling the contract matching process to make like comparisons of counterparty bids for product orders...."

Applicant's invention reefers to maintaining two separate accounts within the Fiduciary account for customer at all times. The purpose is for clearing of a match taking place in a Node where local currencies are different. While the purpose may be the same, but there are two items of distinction:

i) Shepherd does not define *where applicable*. Claim 3 is, however, a fixed feature regardless of the case may be based on its continuous matching property.

ii) The implementation is incorporated into the Node rather than being shadowed- by the proposed system. The matching must be in real time to maintain liquidity and optimum match. Shadowing merely informs

the customer of an outcome; whereas the Applicant's invention allows customer to trade (buy or sell) interactively which means changing position and order as prices change.

In short, the idea is the delayed nature of Shepherd's model precluding any dynamic matching for which the base currency is used for convenience.

Claim 4

David: Column 7 Lines 30-35

" .. depending on the nature of order ... the *custodian server* ... places a block or segregates the shares.. in the account of customer or alternatively transfers shares to escrow account.."

Applicant's invention is based on a built-in automatic process as a part of clearing a match. This is a real time interactive process rather than David's model of connecting to a "custodian" conditioned on the nature of order. The applicant's invention is a *straight through processing* model for efficient on line trading.

Claim 5

David: Column 7 Lines 30-35

" .. depending on the nature of order ... the *custodian server* ... places a block or segregates the shares ... in the account of customer or alternatively transfers shares to escrow account.." and

David: Column 8 Lines 56-65

" ... sending the order to a conventional exchange... the charges may be calculated by the OCES..."

Applicant's invention implements daily adjustment to performance bond which is a part of blocked fund moved to Escrow account. This is necessary for daily cash settlement that has to be marked-to market. David's model describes interfacing with conventional exchanges that charge extra fees for purpose of their providing matching/clearing in lieu of custodian which is a different issue and at any case irrelevant to claim 5.

Claim 6

David: Column 7 Lines 30-35

" .. depending on the nature of order ...the *custodian server* ...places a block or segregates the shares.. in the account of customer or alternatively transfers shares to escrow account.." and

David: Column 8 Lines 56-65

" ...sending the order to a conventional exchange... the charges may be calculated by the OCES..."

Applicant's invention implements daily adjustment to performance bond results in drawing more funds from Fiduciary to Escrow account if marked to market price shows depreciation or customer may withdraw excess funds that have been automatically transferred back from Escrow to Fiduciary by the system. David's model describes interfacing with conventional exchanges that charge extra fees for purpose of their providing matching/clearing in lieu of custodian which is a different issue and at any case irrelevant to claim 6.

Claim 7

David: Column 7 Lines 30-35

" .. Depending on the nature of order ...the *custodian server* ...places a block or segregates the shares... in the account of customer or alternatively transfers shares to escrow account.." and

David: Column 8 Lines 56-65

" ...sending the order ... through a conventional exchange... the charges may be calculated by the OCES..."

David's model generally ignores the concept of daily marked-to-market because its customers are dealing with commodities through specific custodian(s), because it does *not* envisage continuous change of contract price for its securitized products. This kind of "security" is *not tradable.*

Applicant's invention is designed to allow dynamic trading which means even though a contract is made for specified delivery it can still be traded until expiration just like options and futures. Marked-to-market is the property of daily *trading*

A customer who wants to use David's model to order through a conventional exchange will be subjected to the exchanges trading rules under Commodity *Trading* Futures Commission (CFTC) far different from private custodian entity for which David's model OECS is designed.

Claim 8

David: Column2 Lines 13-28

" ....US Patent 5,903,878 describes a system for electronic commerce....US Patent 5,905,974 describes system for auctioning fixed income commodities.... US Patent 5,915,023 describe a system for selling goods or services through a third party...."

Applicant's invention is based on a list of fully specified products that are structured as financial instruments expected to be traded on daily basis until expired at its delivery date. The delivery takes place within the system in the form of cash (representing the buyer) against a bill of lading as posted by a designated bonded warehouse which confirms that the goods have been delivered to requested destination. The Node performs all functions including built-in connectivity with the warehouse.

The system precludes the shipping organization and or agency that are strictly engaged in moving goods from point A to point B. The US Patent 5,903,878 involves transactions generated by buyer and the system tracks the order to a particular merchant. .

The system also precludes any systems that are utilized by matching program using telecommunication system. The US Patent 5, 915, 0230 s about matching buyer's order information (value and transaction summary) against merchant's identical data using public telephone lines.

AS for US Patent 5, 905, 974 a data processing auction system allows off-exchange trading of matched orders of mostly US Government bonds. The system requires special hardware configuration which precludes its relevance to applicant's invention.

Claim 9

David: Column 8 Lines 15-24

" ... a settlement has to be performed.... preferably conducted between the custodian servers... Alternatively, all the *communications* between the custodian servers can be performed through the OCES'.

It is not clear how the settlement can be performed through the OCES without custodian's involvement since all key functions such as cash management and product handling is performed by custodians.

Applicant's invention, as a one-stop shopping process, automatically incorporates the settlement on daily basis all in a single Node because the "custodians" are integrated into the system.

Claim 11

David: Column 8 Lines 15-24

" ... a settlement has to be performed.... preferably conducted between the custodian servers... Alternatively, all the *communications* between the custodian servers can be performed through the OCES'.

David's model uses custodians to secularize the orders generated by customer. It also assumes that the custodian will provide the financial clearing. By declaring that "all the *communications* between the custodian servers can be performed through the OCES' it is probably mostly in the form of duplication the raw information from the custodian and translating that to a settlement statement. It is therefore unlikely that OCES can actually perform cash settlement which means it will need the mechanism needed for cash management as well as products that can be offered to buyers as well as ability to buy.

The issue of clearing and settlement is further complicated when two Nodes at different locations perform financial clearing because each Node incorporates custodian and two distinct Fiduciary accounts that may require exchange of currencies.

Claim 12

David: Column2-3, lines 64-10

"The customer places an order to the server OCES *alerts custodian* to securitize the order as to whether customer has the *proper commodities, assets or funds* and *separates* the same to an *escrow* account",

David: Column 8 Lines 56-65

" ...sending the order to a conventional exchange... the charges may be calculated by the OCES...", and

David: Columns5-6, Lines 60-5.

"...if the customer is interested only in *buying* then registration consists of depositing assets (including funds). Assets are transferred into depository while the funds are credited to his account..."

Applicant's invention in this claim refers to movement of necessary funds as performance bond from Fiduciary account of the Node where the order was initiated to Escrow account of the Node where the match was made.

i) David's model interfaces with custodian who generally accepts deposit from customer, but makes no distinction as to the type of account.

ii) David's model interfaces with one or more custodians who can themselves be customers to each other. This by itself is an issue because the nature of matching and clearing will not be typical. This is contrary to applicant's invention of uniformity of matching and clearing.

iii) Noting that only buyer is expected to make deposit when ordering shows the system being biased towards buyer rather than equal interest for seller and buyer resulting in one-sided trade. This is contrary to applicant's invention which is two-sided trading approach.

Claim 13

David: Column2-3, lines 64-10

"The customer places an order to the server OCES *alerts custodian* to securitize the order as to whether customer has the *proper commodities, assets or funds* and *separates* the same to an *escrow* account",

David: Column 8 Lines 56-65

" ...sending the order to a conventional exchange... the charges may be calculated by the OCES...", and

Columns5-6, Lines 60-5.

"...if the customer is interested only in *buying* then registration consists of depositing assets (including funds). Assets are transferred into depository while the funds are credited to his account..."

David's model requires that a customer's order be securitized by *a* custodian. It is not clear if the matched customer order will be traded as a financial instrument before the expiration date within custodian or to another custodian for repeating the trade process. If so the two custodians must be operationally identical to accept transfer of fund from previous custodian to its Fiduciary account of another. Further, if the conventional exchanges are chosen as alternative and the order is matched the customer must make direct deposit with the exchange and the process ends.

Applicant's invention is about completing settlement process cycle in the Node where the match was made and requires additional fund (based on marked-to-market) as performance bond is adjusted daily. OCES fails to address this issue of repeated trading and hence marked-to-market.

Claim 16

Shepherd, US patent 6, 912, 510

" Miscellaneous parties included:... product sponsors to formally determine the *value* of products on their date-of-maturity; multilateral obligations and payment netting trustee/clearing entity... electronic gateway providers and host system organizations.."

Applicant's invention is about an interface with banking payment system format allowing Fiduciary account communicate with Federal Reserve Automatic Clearing House(ACH) directly, or via the National Clearinghouses in North America. To do so, the local bank must accept the Node as legal entity, as partner, to allow the privilege of direct access to clearing system, for a fee.

Shepherd's system is of supervisory nature and by shadowing the events occurring at clearing and settlement disengages itself from direct clearing and settlement activity. The system allows "parties" that include *netting/clearing*, etc. organizations to be included within the potential list of customers where the shadowing (the information on trade activity) can be performed. The organizations that are directly or indirectly connected to an ACH system are banks and credit card companies which are automatically part of banking system.

Claims 15

David model is designed "....to process the order to a brokerage-type service ... through a conventional exchange "(see column 8 Lines 57-65) and further, Shepherd has included "multilateral obligations and payment netting trustee/clearing entity organization..." (Column 37 Lines 20-31).

Applicant's invention states the time period for daily settlement, including *execution of the trade* to T+1 and for Node-to-Node with different time zone *T +1 + time zone difference* which includes International Date Line for Far Eastern transactions.

To explain why David's model is not applicable, it is necessary to review the industry practices and recent developments.

Clearing and Settlement Practiced in the Industry-

The Central Counterparty (CCP) replaces contracts between seller and buyer with two new contracts, in each of which assumes the role of counterparty. The process is known as *novation* leaving only the CCP as risk holder. CCP is the Depository of Trust and Clearing Corporation (DTCC) which in turn works through its subsidiary National Securities Clearing Corporation (NSCC). This arrangement starts with t+1 around midnight stepping between two parties. On T+2 after notation is in place reports are sent to broker/dealers and settlement takes place at T+3.

Background

Back in late 1990's, the chairman of the U.S. Securities and Exchange Commission (SEC) called on the industry to clear and settle all trades within 24 hours better known as T+1, which means "trade plus one day" and to do that by June 2002. Later on the security industry pushed the date to 2003. In 2004, after it became clear than the cost of conversion to T +1 would be prohibitive, and the T + 24 project was indefinitely postponed. T stands for trade execution in addition to time needed for deposit to hit fiduciary account. It is necessary to include the *settlement time* (corresponding credit/debit) in addition to the clearing time that occurs between the times that deposited monies has been received and excess money has become available to customer (for withdrawal). This mission would have required a major overhaul of brokerage information systems, which now meet a T+3, or 72-hour, requirement. In essence, T+1 will force a switch from industry's traditional batch processing systems to a real-time processing network expected never to crash.

Industry Practices

For the record, NYSE is *order driven* market, that is, all orders are displayed as they come in, London Stock Exchange (LSE), Electronic Communication Network (ECN) and some proprietary electronic commodity trading systems are *quote driven* markets (bid/offer) interacting with dealer as market-maker.

Straight Through Processing (STP)

The concept of T+ 24(hours) period, requires that the industry to switch from batch processing to real time processing network. This means the nature of electronic trading must be Straight Through Processing. According to Ayesha Khanna's Academic Press publication of 2008, the STP framework for the automation of trade related processes are

i) seamless communication between parties,
ii) significant real time processing,
iii) electronic, not physical processing and
iv) non-sequential information exchange,

For an electronic trading system to qualify as straight through processing common steps of all transaction lifecycles must be accomplished. They are i)pre-trade analytics which is all available information about the product intended for trade, ii) creating a trade order that includes securitization, iii) routing and execution of the trade, iv) matching and confirming and v) clearing & settlement.

Based on above explanation, both David model and Shepherd fail to address this principle of straight through processing. In short, a seamless integration of these STP functions is essential to achieve T +1.

Claim 17

Applicant's invention manages Node-to-Node communication for the purpose of clearing and settlement as well as reporting the customer's statement. In the event one of the two Nodes is not a local Node (for example San Jose and Taipei) the settlement requires fund transfer between the two Fiduciary accounts. This, in turn, requires an electronic data transfer protocol that would permit a non US bank to make payment to US bank such as SWIFT MT103 (and MT940 for messaging). This is an important component of clearing and settlement that is in turn a part of straight through processing of the entire communication network. In this fashion cash management and trade execution are integrated to establish T + 1 + 12.

Shepherd supervisory service shadows the trading activity(such as exchanging goods)between two parties and after storing and analyzing the data; it ensures real time setting of obligations between parties by updating shadow records for real time instruction one (or more exchange institutions) to effect. The service will accept one credit record/ one debit record for an exchange obligation at one time. Shepherd's key clients are expected to be credit card companies, credit providers and foreign exchange traders. As such, Shepherd as institution is not performing cash management and credit activity for itself. In short, Shepherd service does not encompass any direct communication with banking system.

System of David is a commodity trading facility that allows two parties trade commodities. The system is interfaced with "custodians" who actually possess the goods arrange credit and accept deposit from order originator introduced by David's OCES server. The system lacks any cash management capability or communication ability to do clearing. Shepherd teaching in the system of David is therefore inadequate to address this claim.

Claim 18

Applicant's invention regarding the exchange rate translation is necessary tool for Node-to-Node clearing because of worldwide matching being performed in a single currency. Even though Shepherd exemplifies a currency exchange translation, it is based on a case-by –case need for a party requesting a currency conversion of choice by the other party. The distinction from the applicant's invention lies in systematic data collection and retrieval for verification of order matching and settlement to avoid any possible dispute.